

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
22 January 2004 (22.01.2004)

PCT

(10) International Publication Number  
**WO 2004/007331 A2**

(51) International Patent Classification<sup>7</sup>:

B66B

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:

PCT/US2003/019856

(22) International Filing Date: 23 June 2003 (23.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2002-206866 16 July 2002 (16.07.2002) JP

(71) Applicant (*for all designated States except US*): OTIS ELEVATOR COMPANY [US/US]; SNYDER, Troxell K., 10 Farm Springs, Farmington, CT 06032 (US).

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): SHIBASAKI, Shusaku [JP/JP]; 2700-50 Koike Shibayama-cho, Sanbu-gun, Chiba 340-0822 (JP).

(74) Agent: SNYDER, Troxell, K.; OTIS ELEVATOR COMPANY, 10 Farm Springs, Farmington, CT 06032 (US).

(54) Title: CONICAL SPRING BUFFER FOR AN ELEVATOR

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

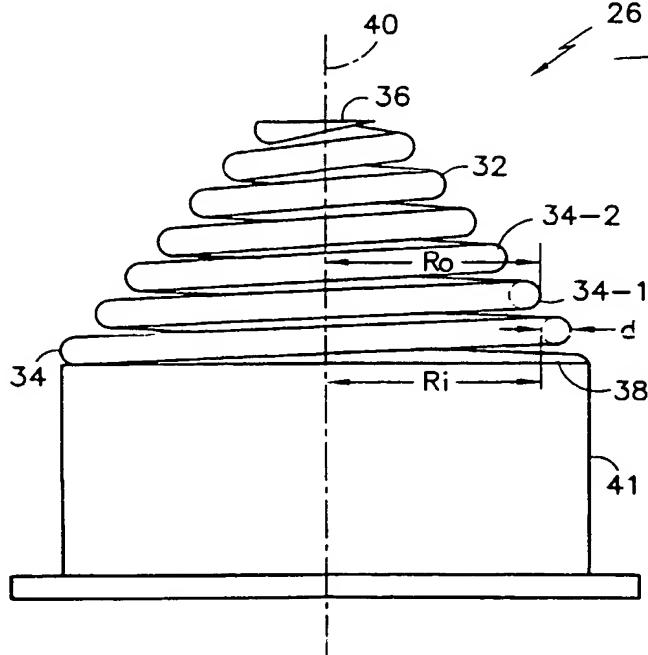
**Declaration under Rule 4.17:**

— *of inventorship (Rule 4.17(iv)) for US only*

**Published:**

— *without international search report and to be republished upon receipt of that report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*



(57) Abstract: A spring buffer (26) for an elevator car (12) includes a conical spring coil (32).

WO 2004/007331 A2

**BEST AVAILABLE COPY**